



tubofan

**INSTALLATION / OPERATION
MANUAL**

**E89M & E89MS
PROVER / HOLDING CABINET**

spudtubofaninfo.com.cn

MANUFACTURED BY

Moffat Limited
PO Box 10001
Christchurch
New Zealand
Ph: (03) 389 1007
Fax: (03) 389 1276

WORLD-WIDE BRANCHES**UNITED KINGDOM**

Blue Seal
Units 6-7, Mount Street Business Park
Mount Street, Nechells
Birmingham B7 5QU
Ph: (121) 327 5575
Fax: (121) 327 9711

UNITED STATES

Moffat Inc
3765 Champion Blvd
Winston-Salem
North Carolina 27115
Ph: (336) 661 0257
Fax: (336) 661 9546

CANADA

Serve Canada
22 Ashwarren Road
Downview
Ontario M3J1Z5
Toll Free: 800 263 1455
Ph: (416) 631 0601
Fax: (416) 631 0315
info@servecanada.com
www.servecanada.com
www.moffat.com

NEW ZEALAND

Christchurch
Moffat Limited
PO Box 10-001
16 Osborne Street
Christchurch
Ph: (03) 389 1007
Fax: (03) 389 1276

Auckland
Moffat Limited
4 Waipuna Road
Mt Wellington
Auckland
Ph: (09) 574 3150
Fax: (09) 574 3159

AUSTRALIA

Victoria
Moffat Pty Limited
740 Springvale Road
Mulgrave, Melbourne
Victoria 3171
Ph: (03) 9518 3888
Fax: (03) 9518 3838

New South Wales
Moffat Pty Limited
3/142 James Ruse Drive, Rose Hill
PO Box 913, Smithfield
Sydney, N.S.W. 2142
Ph: (02) 8833 4111
Fax: (02) 8833 4133

Western Australia
Moffat Pty Limited
67 Howe Street
Osbourne Park
WA 6017
Ph: (08) 9202 6820
Fax: (08) 9202 6836

Queensland
Moffat Pty Limited
30 Prosperity Place
Geebung, Brisbane
Queensland 4034
Ph: (07) 3630 8600
Fax: (07) 3630 8623

The reproduction or copying of any part of this manual by any means whatsoever is strictly forbidden unless authorized previously in writing by the manufacturer.

In line with policy to continually develop and improve its products, Moffat Ltd. reserves the right to change the specifications and design without prior notice.

© Copyright Moffat Ltd. November 2006.

Contents

Introduction	2
Installation	3
Before Connection	
Location	
Electrical Connection	
Water Connection (Auto Fill Models Only)	
Rack Width	
Stacking with Convection Oven	
Specifications.....	5
Operation	9
Description of Controls	
Condensation Channel	
Operating in PROOF Mode	
Bake-Off	
Problem Solving	
Hints	
Operating in HOLD Mode	
Cleaning and Maintenance.....	13
Trouble Shooting	14
Spare Parts	15
Circuit Schematics.....	16
E89 Prover / Holding Cabinet (Manual Fill)	
E89A Prover / Holding Cabinet (Auto Fill)	

Date Purchased.....	Serial No
Dealer	
Service Agent	

Introduction

We are confident that you will be delighted with your E89M/MS PROVER / HOLDING CABINET, and it will become a most valued appliance in your commercial kitchen.

A new oven can seem very complex and confusing at first glance. To ensure you receive the utmost benefit from your new Prover, there are two important things you can do.

Firstly

Please read the instruction book carefully and follow the directions given. The time taken will be well spent.

Secondly

If you are unsure of any aspect of the installation, instructions or performance of your prover, contact your E89M/MS dealer promptly. In many cases a phone call could answer your question.

spd.sunwayinfo.com.cn

Installation Requirements



It is most important that this prover / holding cabinet is installed correctly and that operation is correct before use.

Installation shall comply with local electrical, health and safety requirements.

Before Connection to Power Supply

- Remove all packing.
- Check equipment and parts for damage. Report any damage immediately to the carrier and distributor.
- Remove protective plastic coating from the side panels.
- Check that the available power supply is correct to that shown on the rating plate located on the right-hand side panel.

E89MS 110-120 Volts A.C, 60 Hz, 1P+N+E, 1.50 kW, 12.5 A @ 120V

E89M/MS 208-220 Volts A.C, 50/60 Hz, 1P+N+E, 1.45 kW, 6.5 A @ 220V

E89M/MS 220-240 Volts A.C, 50/60 Hz, 1P+N+E, 1.70 kW, 7.1 A @ 240V

Location

- To ensure correct ventilation for the and controls the following minimum installation clearances are to be adhered to:

Rear	0 mm / 0 "
Left-hand side	0 mm / 0 "
Right-hand side	25 mm / 1 "

Electrical Connection

- E89M/MS provers are supplied fitted with cords. Ensure unit is fitted with correct cord and plug.
- To access the electrical connection terminal block, grounding lug and strain relief, remove the right hand side panel.

WARNING - THIS APPLIANCE MUST BE EARTHED / GROUNDED

Water Connection (Auto Fill Models Only)

- A cold water supply should be fitted to the water inlet which is located near the rear of the right hand side of the unit.
- A connection elbow and sealing washer is supplied with this unit for direct connection of a ½" ID hose, and is recommended for easy installation and service.
- Connect water supply - Max inlet pressure 550kPa / 80psi.
- Turn on water supply to check for leaks.

Rack Width

- The E89 prover has been designed to accept either 460mm (18") or 405mm (16") wide trays or 1/1 GN, 1/2/1 GN trays.
- The prover comes factory set for 460mm (18") trays, a rack spacer kit (Part no. 025685) is required to change to 405mm (16") trays or Gastronorm pans.

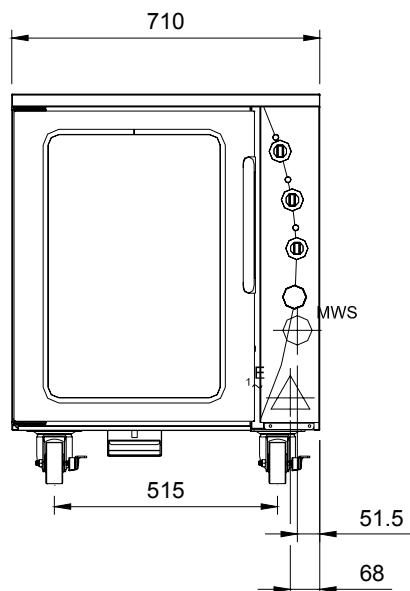
Installation

Stacking with Convection Oven

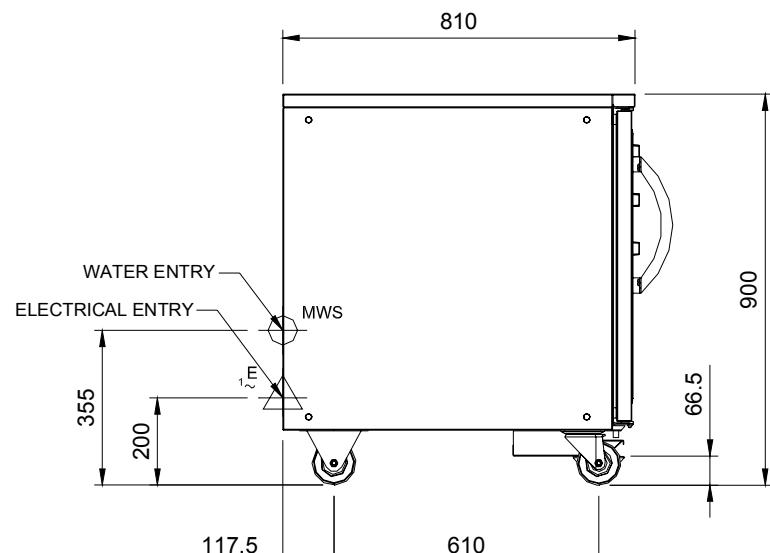
- The E89M/MS prover is supplied standard for stand alone use.
- Optionally, the E89M/MS prover can be double stacked, or combined underneath a TURBOFAN E32M/MS convection oven as a complete unit. For this a stacking kit is required.
- For installation of the stacking kit, refer to the instructions provided with the kit.

spd.sunwayinfo.com.cn

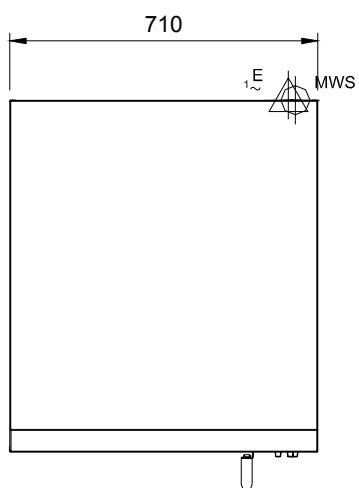
E89M Prover



Front



Side

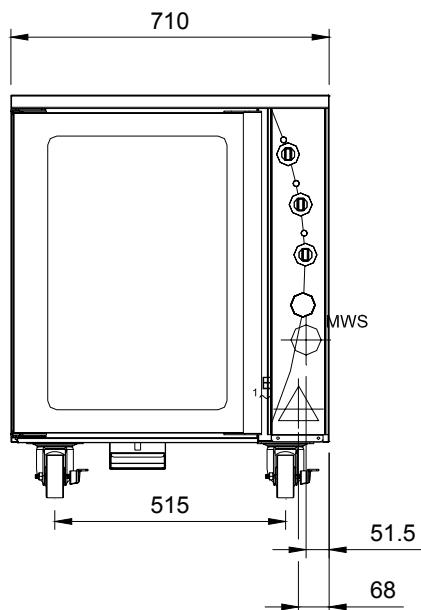


Plan

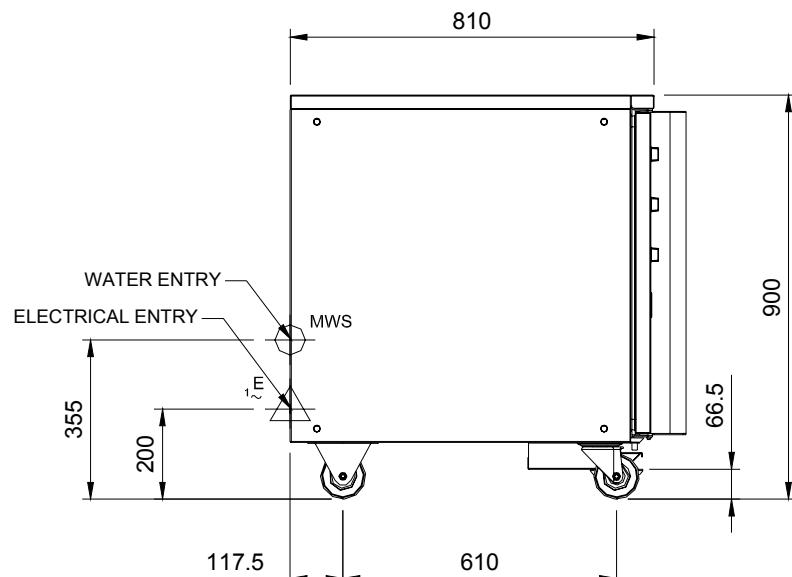
Electrical Connection	208-220 Volts A.C, 50/60 Hz, 1P+N+E, 1.45 kW, 6.5 A @ 220V 220-240 Volts A.C, 50/60 Hz, 1P+N+E, 1.70 kW, 7.1 A @ 240V
Cold Water Connection (Auto Fill Models Only)	1/2" ID hose (550kPa / 80psi maximum pressure)

Specifications

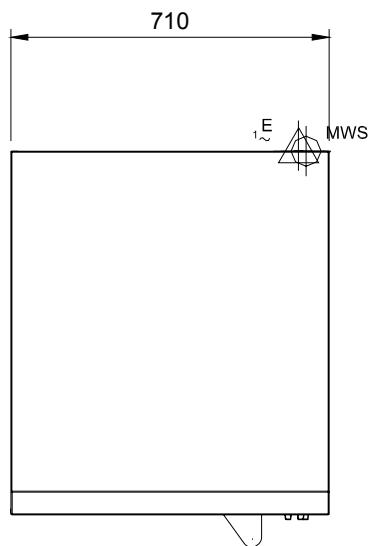
E89MS Prover



Front



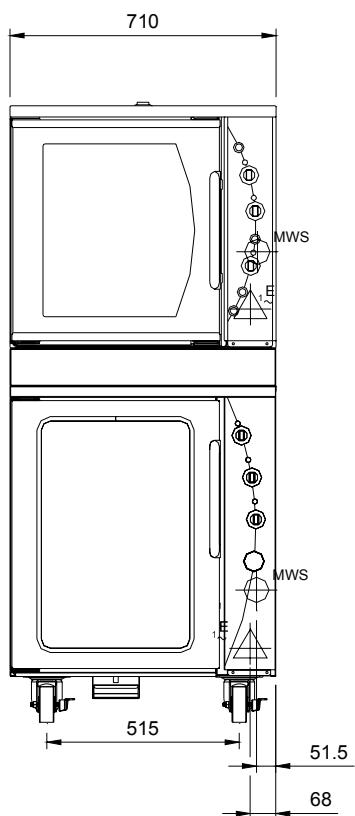
Side



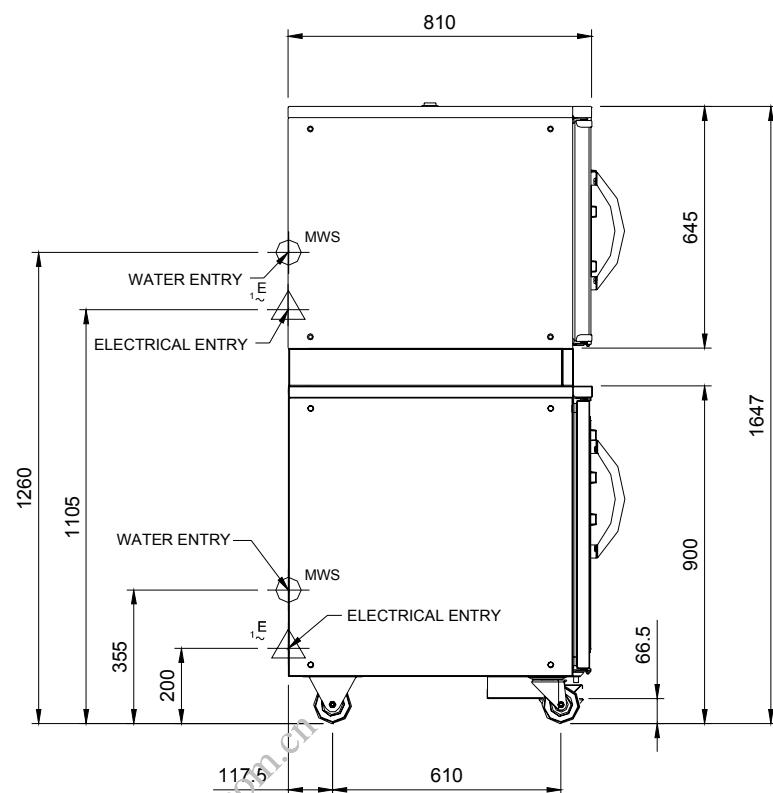
Plan

Electrical Connection	110-120 Volts A.C, 60 Hz, 1P+N+E, 1.50 kW, 12.5 A @ 120V 208-220 Volts A.C, 50/60 Hz, 1P+N+E, 1.45 kW, 6.5 A @ 220V 220-240 Volts A.C, 50/60 Hz, 1P+N+E, 1.70 kW, 7.1 A @ 240V
Cold Water Connection (Auto Fill Models Only)	1/2" ID hose (550kPa / 80psi maximum pressure)

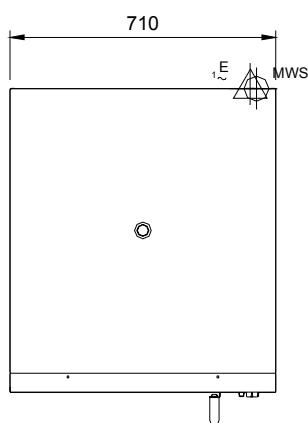
E89M Prover / E32M Oven



Front



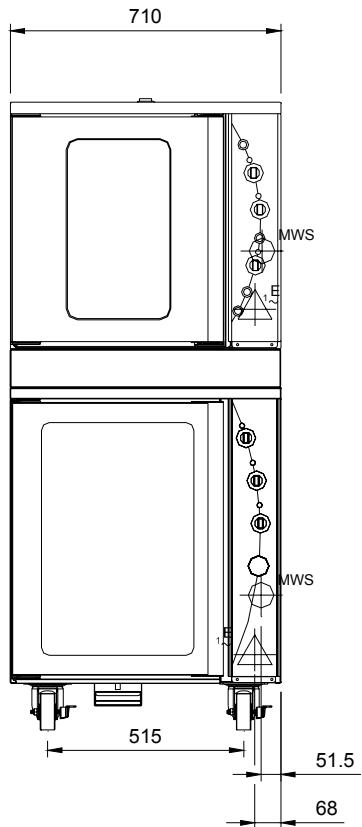
Side



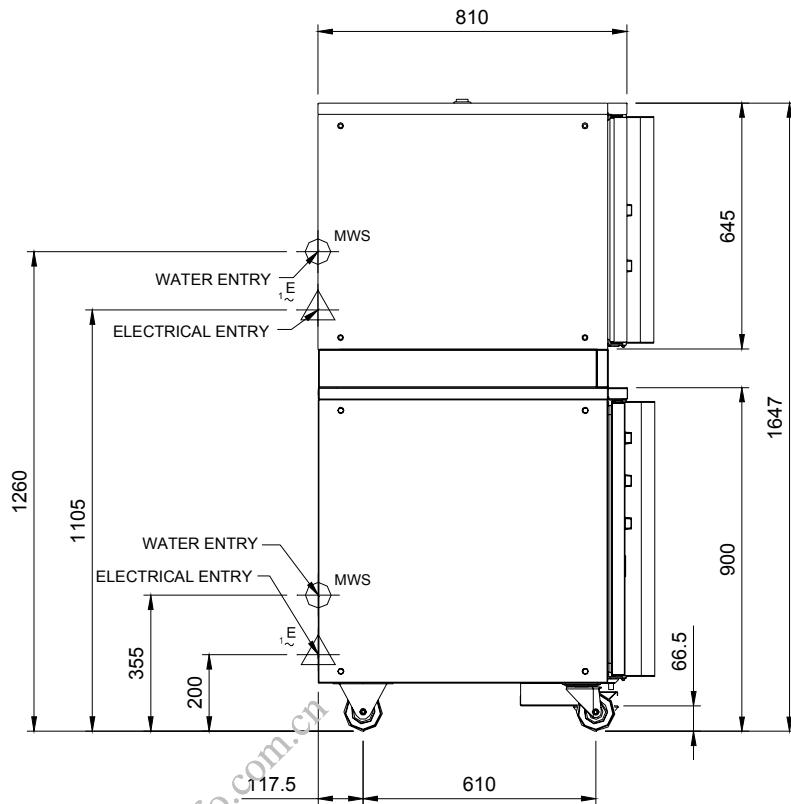
Plan

Specifications

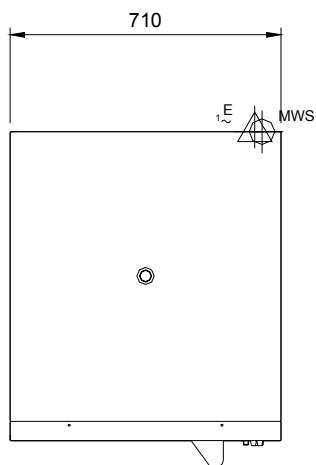
E89MS Prover / E32MS Oven



Front



Side



Plan

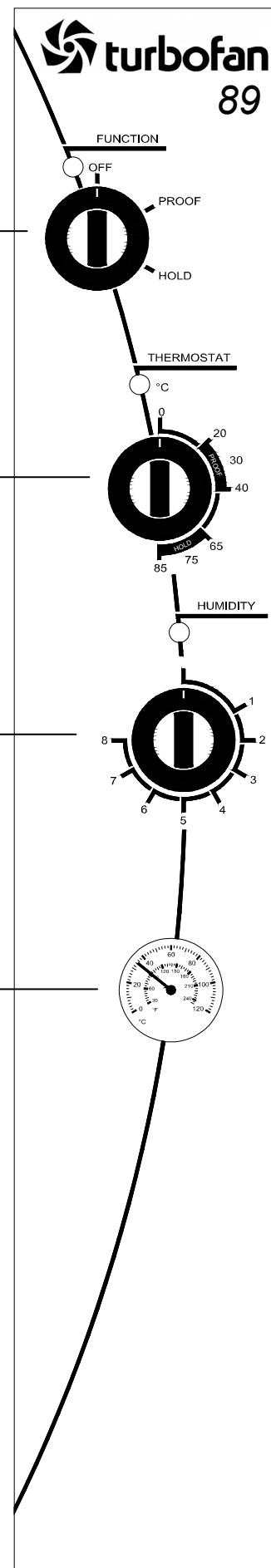
Operation Guide

Description of Controls



Function

- O Unit is off
- PROOF Unit is in proving mode (indicator illuminates)
- HOLD Unit is in holding mode (indicator illuminates)



Thermostat

Temperature range 0 - 85°C (32 - 185°F).
 20 - 40°C (65 - 105°F) Proving range
 65 - 85°C (150 - 185°F) Holding range
 Indicator illuminates when the elements are cycling ON to maintain set temperature.
 (Controls the cabinet air temperature)



Humidity Control

1 to 5 Setting for butter based pastries (croissants, Danish pastries etc.)
 5 to 8 Settings for yeast based breads and doughs.
 Indicator illuminates when elements are cycling ON to maintain set temperature.
 (Controls the cabinet humidity in PROOF mode only)

Thermometer

Indicates cabinet temperature.
 Dual Centigrade and Fahrenheit scale.

Condensation channel

Below the door there is a condensation channel and removable water collection drawer for the purpose of collecting door condensation run-off.

Operation

Operating in PROOF Mode

Ensure that power is supplied to the unit and the water trough is filled

It is recommended that the prover operates empty before loading with product

- Warm days up to 10 minutes
- Cool days up to 30 minutes

1. Ensure water tank is filled with water

Standard models: Open the prover door and fill the water tank located at the front of the right hand side rack. The tank should be filled to 20mm ($\frac{3}{4}$ ") from the top of the tank.

Remember to top up the water tank when the water level is below the halfway level in the tank (before the heating element is exposed).

Auto fill models: Check the water tank is full and that the heating element is well covered.



2. Set function to PROOF

Indicator light will illuminate when the switch is in the "PROOF" position.



3. Set thermostat to desired proving temperature

Indicator light will illuminate when the elements are cycling on to maintain set temperature.

25-30°C Butter based pastries

35-40°C Yeast based breads and doughs



4. Set humidity to desired level

Indicator light will illuminate whenever elements are cycling on to maintain set humidity.

As a guide;

Set humidity to between 6 to 7 marks on control panel as a general rule.

Increase or decrease as found necessary for specific product types.

Humidity is required only to avoid product dry skinning on surface. Do not set humidity such that product becomes sticky and wet on surface. A silky to touch surface on the product is a general recommendation for correct humidity levels.

Avoid excess humidity levels as this will also create excess condensation in the cabinet interior.

Note: Butter based product require much less humidity than breads.

Bake-Off

This prover has been designed for use together with a refrigerator and oven to take frozen uncooked yeast or butter based products to finished cooked products.

1. Prepare product

Arrange frozen products onto baking trays.

2. Thaw

Refrigerate at 4°C (39°F) overnight. Do not leave at room temperature or product may dry out.

3. Prove

Place thawed products directly from the refrigerator into the pre-heated prover. Prove for 30-60 minutes dependant on product and food proving recommendations.

4. Bake

Place proved product directly from the prover into the pre-heated oven. We recommend the Moffat E32M/MS Turbofan Oven.

Problem Solving

Product collapses

When using frozen dough which collapses or shrinks in the oven after proving, this is caused by too much proving. Reduce the proving time for the next batch.

Dry product

The dough piece in the prover should never be dry to the touch. A moist, firm and silky membrane should cover the dough piece during proving.

Wet product

The dough piece in the prover should not be wet to touch whilst proving and should not adhere to fingers. Water should not condense on the trays. If it does there is either too much moisture or too little heat in the prover.

If there are any problems with your dough the most likely causes are as follows:

- Too much heat and too little moisture.
- Not enough heat and too much moisture.
- Proving time too long or too short.
- Incorrect oven temperature.
- Incorrect maturity adjustment in the formulation of the dough for the flour.
- Incorrect thawing procedure, or handling of the dough after thawing.

Hints

Heat

It is better to operate the prover at a lower temperature with adequate moisture rather than at a hotter temperature with too little moisture.

Yeast

Yeast activity starts very slowly at about 5°C (41°F) and increase in speed or gas production as the temperature rises. When a temperature of approximately 60°C (140°F) is reached, the yeast is killed and baking of the aerated product starts. Thus different rates of proving occur as the temperature changes.

Flour

The amount of proving required is determined by the quality of the GLUTEN in the flour. Gluten is a rubber like product and can perish if stretched too far by too much proving. Collapsing of the product or shrinkage will occur.

Proof

You must recognise the prove of the product by the appearance of the dough rather than the size.

Operation

Operating in HOLD Mode

Ensure that power is supplied to the unit and the water trough is filled

It is recommended that the cabinet operates empty before loading with product

- Warm days up to 10 minutes
- Cool days up to 30 minutes



1. Set function to HOLD

Indicator light will illuminate when the switch is in the “HOLD” position.



2. Set thermostat to desired holding temperature

Indicator light will illuminate when the elements are cycling on to maintain set temperature.



3. Humidity

The humidity is not used in HOLD mode. The setting on this dial will have no effect as the wet element is disabled.

4. Thermometer

The thermometer gives an accurate reading of the cabinet temperature to ensure that the product being held is at the correct temperature.

spd.sunwayinfo.com.cn

Cleaning Guidelines



Caution:

ALWAYS TURN OFF THE POWER SUPPLY BEFORE CLEANING.

THIS UNIT IS NOT WATER PROOF.

DO NOT USE WATER JET SPRAY TO CLEAN INTERIOR OR EXTERIOR OF THIS UNIT.

Cabinet

Clean with a good quality stainless steel cleaning compound. Harsh abrasive cleaners may damage the surface.

Side racks

To remove, take hold of the centre rung and lift upwards to disengage the rack key-holes from the hanger studs. To replace, hold horizontally, engage keyholes onto studs and push down.

Door

Wash with warm water and detergent solution using a soft sponge in straight lines up and down the door. Rinse with clean, warm water and dry off.

Clean door seal with warm water and detergent solution using a soft sponge when required.

Water tank

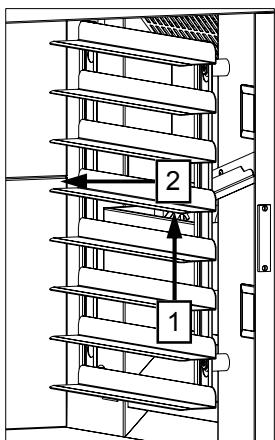
To remove lift RH side rack and pivot at rear, remove tank by lifting off its hanger studs. Clean with warm soapy water. Rinse thoroughly and refit.

Water trough element

When the element becomes limed/scaled remove the water trough and clean. Replace water trough and half fill with white vinegar or acetic acid, then fill to the normal level with water. Switch the unit on, turn the humidity to '8' and operate for approximately 30 minutes. Remove trough and clean the element with a damp cloth when cooled. Rinse out the trough and refit to unit.

This procedure is recommended to be carried out once a week. Frequency of cleaning the element may be increased or decreased depending on the lime depositing on the element.

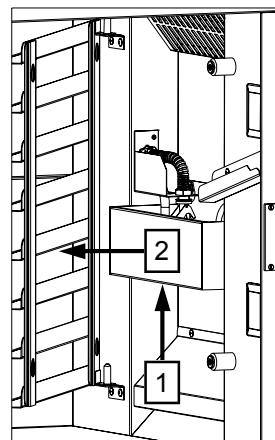
Water trough access



Open right hand rack support.

- 1) Lift rack upwards to disengage keyholes.
- 2) Hinge on rear supports to open.

Water trough removal



Lift out water trough.

- 1) Lift trough upwards to disengage keyholes.
- 2) Remove water trough.

Trouble-shooting

Fault	Possible Cause	Remedy
The prover/holding cabinet does not operate / start.	The mains isolating switch on the wall, circuit breaker or fuses are "off" at the power board.	Turn on.
	The power switch on the cabinet is off.	Rotate switch. Indicator will illuminate.
No humidity.	Unit is in HOLD mode	Switch unit to PROOF mode. (Humidity is only generated in PROOF mode).
	No water in trough.	Fill with water.
Slow recovery.	Overloading of cabinet.	Reduce batch size.
	Door opened unnecessarily.	Do not open unnecessarily.
Door does not close.	Tray in way of door.	Correctly position tray in rack.

spd.sunwayinfo.com.cn

Replacement Part List**Controls**

022789	Function Switch
020823	Knob (Function Switch)
022787	Thermostat (Cabinet Temperature)
024527	Thermostat (Humidity)
020823	Knob (Temperature Thermostat)
021472	Knob (Humidity Thermostat)
020849	Neon Indicator (208-240V)
023857	Neon Indicator (110V-120V)
022788	Thermometer (Dual °C & °F)

Auto Fill Option

020851	Solenoid Valve (208-240V)
021617	Solenoid Valve (110-120V)
021534	Relay (208-240V)
021535	Relay (110-120V)
022250	Float Switch (208-240V)
022250	Float Switch (110-120V)

Motor & Elements

013998	Fan / Motor (208-240V)
013999	Fan / Motor (110-120V)
014001	Dry Element (208-240V)
015759	Dry Element (110-120V)
015224	Wet Element (208-240V)
015230	Wet Element (110-120V)

Door

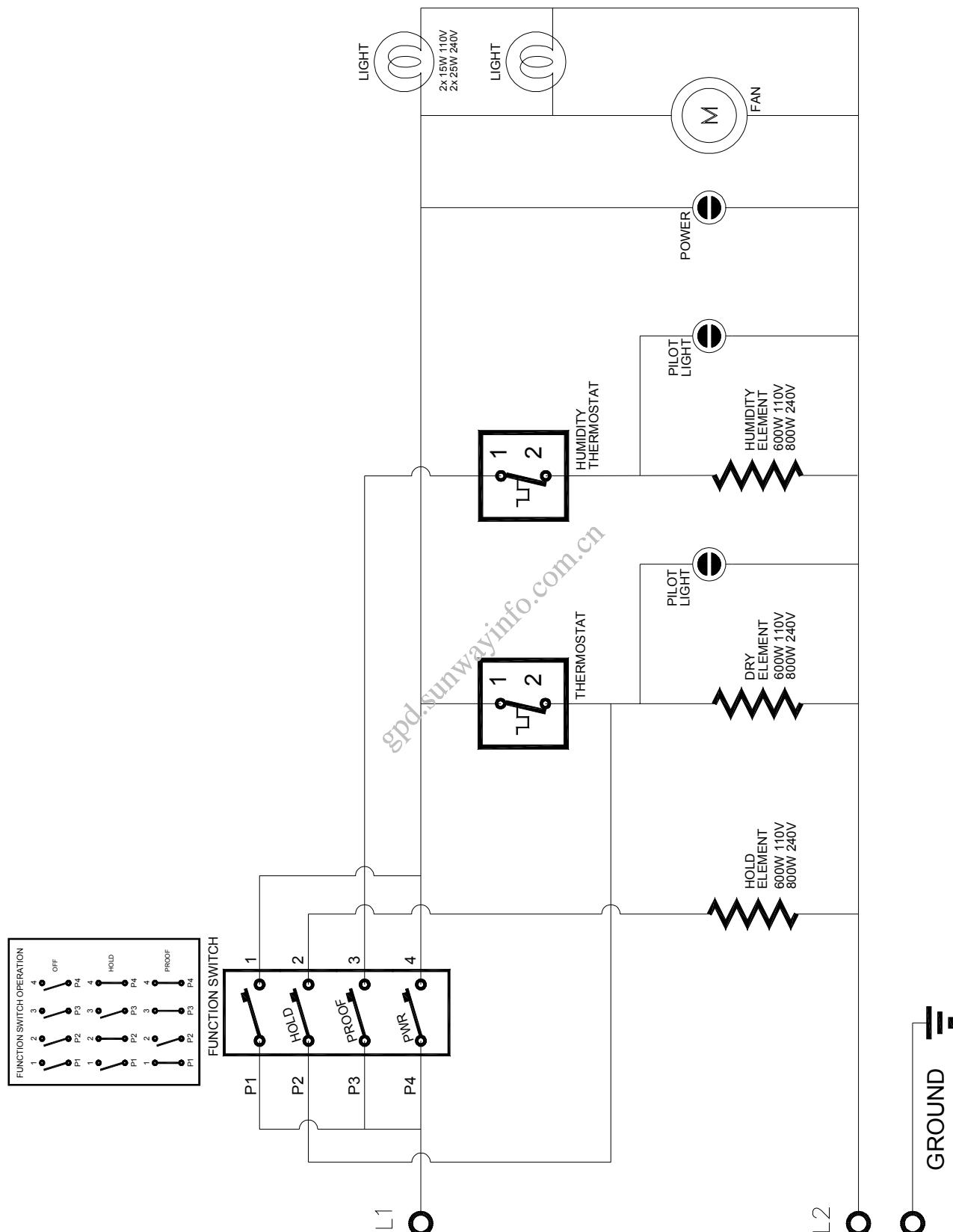
SA1686	Door Assembly (E89M)
SA1687	Door Assembly (E89MS)
021468	Handle (E89M)
025519	Handle (E89MS)
020082	Hinge Top Assembly (Assembled with bush)
020083	Hinge Bottom Assembly (Assembled with bush)
017905	Hinge Bush
018947	Magnetic Catch
025988	Door Seal

Racks

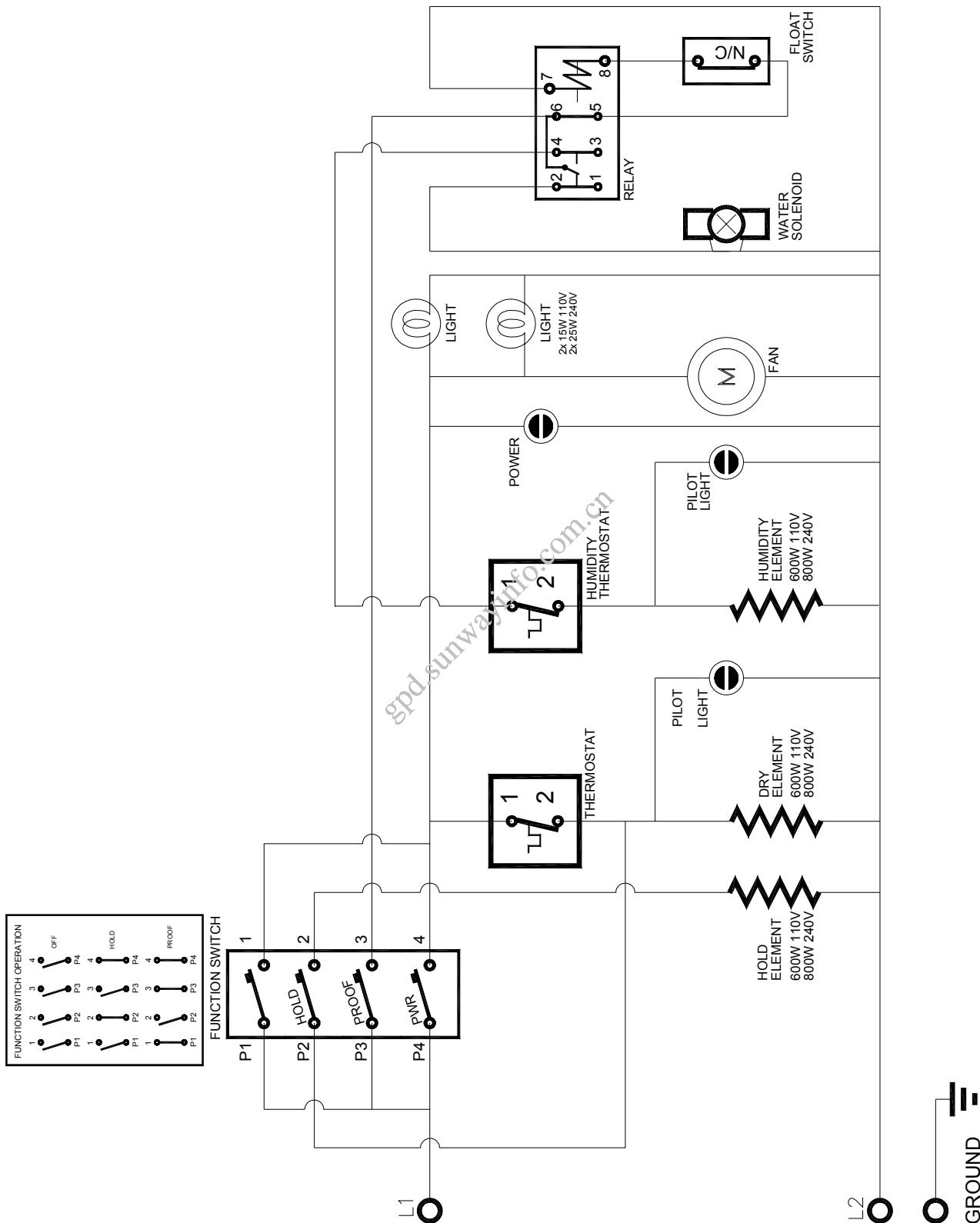
025604	Rack RH
025608	Rack LH
025609	Rack Spacer Channel
025732	Condensate Drawer

Circuit schematic

E89M/MS Prover / Holding Cabinet - Manual Fill



E89A M/MS Prover / Holding Cabinet - Auto Fill



spd.sunwayinfo.com.cn

spd.sunwayinfo.com.cn